AMSAT News Service Weekly Bulletins
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SB SAT @ AMSAT $ANS-186.01
STS-50 SAREX FREQUENCY CHANGE

HR AMSAT NEWS SERVICE BULLETIN 186.01 FROM AMSAT HQ
SILVER SPRING, MD JULY 4, 1992 BID: $ANS-186.01
TO ALL RADIO AMATEURS BT

STS-50 SAREX Frequency Change Necessary Because Of Antenna Problems

SAREX activities aboard the Space Shuttle Columbia continue to center around issues related to the performance of the SAREX antenna.

Flight crew members KB5SIW & KB5SIX have worked closely with ground controllers and SAREX operational personnel in an attempt to improve antenna performance. During Orbit 89 the SAREX antenna was modified by KB5SIX according to an IFM (In Flight Maintenance Procedure) drawn up by antenna designers at the Johnson Space Center in Houston. Despite these changes, the antenna performance continues to be less than pre-flight analysis had expected. After reviewing all of the data collected and procedures attempted to this point, SAREX personnel have decided that on further adjustments or modifications will be made to the SAREX antenna system during the balance of this flight. As a result, frequencies available for SAREX operations have been severely limited.

Based upon current flight hardware performance coupled with a desire to conform as nearly as possible with world-wide band plans, SAREX operational personnel have been forced to make yet another frequency change to STS-50 operating frequencies. Effective from Orbit 101 (23:00 UTC July 1st), All SAREX OPERATIONS WILL TAKE PLACE ON 144.450 MHz SIMPLEX FOR THE BALANCE OF THE STS-50 MISSION.

It should be pointed out that consistent with SAREX mission objectives a number of special contacts between the crew aboard Columbia involving school students and youth groups around the world were planned pre-flight. Due to the frequency changes being announced in this bulletin it will be necessary to these contacts to take place on the open contact frequency of 144.450 MHz simplex.

SAREX asks for the cooperation of all radio amateurs in allowing the crew members aboard Columbia to facilitate these specially planned contacts. Operators attempting to contact the Columbia astronauts are requested to be mindful of these special contacts and yield to these groups when either KB5SIW or KB5SIX indicate that they are conducting such contacts during the balance of the mission.

73 and Good Luck From The SAREX Team

/EX
SB SAT @ AMSAT $ANS-186.02
W0SL HELPS IN SAREX PROGRAM

HR AMSAT NEWS SERVICE BULLETIN 186.02 FROM AMSAT HQ
SILVER SPRING, MD JULY 4, 1992 BID: $ANS-186.02
TO ALL RADIO AMATEURS BT

W0SL Helps STS-50 Commander, KB5SIW, "Call Home"

On the morning of June 30, 1992 at 13:45 UTC, Mrs. Marge Richards of

Florissant, Missouri was able to talk to her son, Dick Richards (KB5SIW) using the station of Roy Welch (W0SL). KB5SIW is the commander of the Space Shuttle Columbia during the current flight of STS-50.

The shuttle was passing over the Texas Gulf coast at the time of the QSO. W0SL and his team were fortunate to have a good pass even with only an 8 degree maximum elevation in St. Louis, MO area. The local NBC affiliate TV station, KSDK, carried the action on the noon news and again on the 6:00 pm news, local time. The CBS television affiliate, KMOV, carried an interview with Marge on the 10:00 pm news with sound recordings from the QSO.

There were also three local amateurs helping to man video cameras and the liaison telephone link to the Johnson Space Center in Houston. Thanks to Larry Roberts (W9MXC) and John Nell (N9FTA) for manning the cameras. Thanks to Dick Bowes (WB0VOE) for bringing Marge to my QTH and manning the telephone link with John Nickel (WD5EEV) and Doug Loughmiller (KO5I) at the JSC. Most of all, thanks to Marge and Dick for the fun.

[The AMSAT News Service (ANS) would like to thank Roy Welch (W0SL) for this ANS bulletin item.]

/EX
SB SAT @ AMSAT $ANS-186.03
LOCAL AMSAT MEETING IN WASH DC AREA

HR AMSAT NEWS SERVICE BULLETIN 186.03 FROM AMSAT HQ
SILVER SPRING, MD JULY 4, 1992 BID: $ANS-186.03
TO ALL RADIO AMATEURS BT

Local AMSAT Group Meeting At Goddard Space Flight Center (GSFC)

There will be a follow up meeting to the January 1992 gathering at the Intelsat HQ as hosted by Ken Nichols (KD3VK).

PLACE: NASA/GODDARD SPACE FLIGHT CENTER
BUILDING 3 AUDITORIUM
GREENBELT, MARYLAND

DATE: SUNDAY, JULY 12, 1992
2:00 - 5:00 P.M. EDT
Rain or Shine !!!

TALK-IN: W3ZM/R 146.835 MHz FM located at WA3NAN.

First timers are welcome. Pass the word to others, including on your local repeater net. Bring a friend!

Note: Pre-registration is required for those who did not register with Ken for the Jan 92 meeting. Come early enough to sign in at the GSFC Main Gate on Greenbelt Road (MD193). Bring legal picture ID to show during sign in. Main Gate House phone: 301-286-8661. To register, contact host, see below.

AGENDA (Tentative)

2:00-2:30 pm: Welcome, Introductions and Opening Remarks.

2:30-4:00 pm: Discuss results of January questionaire, direction
of local chapter, status of current OSCARs,
AMSAT Phase-3D Project, Gateways,
Beginner's Opportunities, the coming AMSAT-NA
Annual Meeting and Space Symposium, and other hot topics.

4:00-5:00 pm: Individual discussion groups.

For more information contact:

Pat Kilroy WD8LAQ
Packet: WD8LAQ @ WB3V.MD
Internet: wd8laq @ amsat.org
Work Phone: 301-731-8695

Extra Attraction: The NASA/GSFC Visitor Center will be open to the public 10:00am-4:00pm. This includes the Space Museum Hall of Satellites, Gift Shop and Picnic Area. Enter from Soil Conservation Road. VC Phone: 301-286-8981 and 286-6476.

Ham radio in space is becoming more exciting than ever. AMSAT members are encouraged to start a regional interest group in their area where none is already in place. A good place to start is on your local 2m repeater!

/EX
SB SAT @ AMSAT $ANS-186.04
AO-13 OPERATIONS NET SCHEDULE

HR AMSAT NEWS SERVICE BULLETIN 186.04 FROM AMSAT HQ
SILVER SPRING, MD JULY 4, 1992 BID: $ANS-186.04
TO ALL RADIO AMATEURS BT

AMSAT-NA AO-13 Operations Net Schedule

AMSAT Operations Nets are planned for the following times. Mode B nets are conducted on AO-13 on a downlink frequency of 145.950 MHz and Mode J/L on a downlink of 435.970 MHz.

Date	UTC	Mode	Phs	NCS	Alt
11-Jul-92	2300	B	225	W5IU	WA5ZIB
19-Jul-92	0000	B	164	WJ9F	WA5ZIB
1-Aug-92	2000	B	168	VE2LVC	W9ODI

Guest commentators are planned. Join the Net if you have questions. In the unlikely event that either the Net Control Station (NCS) or the alternate NCS does not call on frequency, any participant is invited to act as the NCS.

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Slow Scan Television On A0-13

The SSTV net will meet on a downlink frequency of 145.925 MHz, Mode B at MA 165, UTC Sundays. Also try Mode J, UTC Saturdays at MA 165, on a downlink frequency of 435.980 MHz. Try the various AMSAT Nets for scheduling at other times.

/EX
SB SAT @ AMSAT $ANS-186.05
AO-21 STATUS FROM DB2OS

HR AMSAT NEWS SERVICE BULLETIN 186.05 FROM AMSAT HQ
SILVER SPRING, MD JULY 4, 1992 BID: $ANS-186.05
TO ALL RADIO AMATEURS BT

DB2OS Provides The Latest Status Of AO-21/RUDAK Operations

RUDAK has been operational with the "software" FM repeater (DSP) for nearly 2 weeks now. The FM-Mode is in continous operation at the present time and is not being interrupted by ranging or telemetry broadcasts.

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             Uplink 435.016 MHz  --> Downlink 145.987 MHz

At times it has been noted that the receiver so sensitive that it is
possible to work the FM Mode with only a 1 Watt H/T and a 20 element cross-
yagi antenna!  We have already identified illegal signals (INTRUDERS) on
the uplink (exclusive satellite band) when the satellite is leaving Europe
to the south, i.e. a packet radio link and possibly a commercial phone
patch repeater.

If the receiver becomes desensitized as a result of the QRM mentioned
above, about 10-15 dB MORE power is necessary to put a good signal through
the transponder.  There is still no complete explanation for this effect.

We hope that AO-21 RUDAK will remain on for awhile and we will continue
the FM-Mode for the next 1-2 weeks, before some voice and other experiments
will resume.  There are no plans at the present time to use the RUDAK BBS
Mailbox System.  The BBS hardware (the same flown on AO-13) has been
confirmed to be 100% functional, but our efforts are now concentrating on
the new RTX-2000 Digital Signal Processing (DSP) hardware.  The FM-Mode for
example is completly done by software!

AMSAT OSCAR-21 is the first such Amateur Radio Satellite with DSP capabili-
ties.

73s Peter DB2OS
    Gerhard DG2CV
    AMSAT-DL RUDAK-Group

/EX
SB SAT @ AMSAT   $ANS-186.06
FO-20 MODE JA TRANSPONDER SCHED

HR AMSAT NEWS SERVICE BULLETIN 186.06 FROM AMSAT HQ
SILVER SPRING, MD JULY 4, 1992        BID: $ANS-186.06
TO ALL RADIO AMATEURS BT

FO-20 Mode JA Transponder Schedule

08-Jul-92 02:40 UTC until 09-Jul-92 01:10 UTC
15-Jul-92 01:15 UTC until 16-Jul-92 01:35 UTC
22-Jul-92 01:40 UTC until 23-Jul-92 01:55 UTC

           FO-20 Mode JA Transponder Frequencies

Telemetry Beacon    435.795 MHz (CW)
Mode JA Uplink      145.900 - 146.000 MHz (SSB, CW)
Mode JA Downlink    435.800 - 435.900 MHz (SSB, CW, Inverting)

/EX
SB SAT @ AMSAT   $ANS-186.07
SUMMER AO-13 TRANSPONDER SCHED

HR AMSAT NEWS SERVICE BULLETIN 186.07 FROM AMSAT HQ
SILVER SPRING, MD JULY 4, 1992        BID: $ANS-186.07
TO ALL RADIO AMATEURS BT

AO-13 Late Summer Schedule Announced

The current schedule for AO-13 is as follows:

N QST 1992 May 08  AO-13 Transponder Schedule  Jun 10 - Jul 20
Mode-B  : MA 000 to MA 165 !  Mode-JL on Mon, Wed   !
Mode-JL : MA 165 to MA 200 !  Fri and Sat UTC only. ! Alon/Alat
Mode-LS : MA 200 to MA 215 !  S Beacon on "L" days  !  210/1
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Mode-B  : MA 215 to MA 256 !  S Transp on "B" days  +----------/
Omnis   : MA 250 to MA 060 !  Mode L OFF after Jun 29 until
Aug 17. Next attitude change Jul 20, to 150/0 until Sep 21.
    73 de Peter DB2OS, James G3RUH and Graham VK5AGR.

      AO-13 Transponder Schedule 1992 Aug 17 - Sep 21
----------------------------------------------------------------
 Mode-B  : MA   0 to MA  40 !  from 1992 Aug 17 until Sep 21
 Mode-S  : MA  40 to MA  50 !<- S transponder; B trsp. is OFF!
 Mode-LS : MA  50 to MA  55 !<- S beacon + L transponder
 Mode-JL : MA  55 to MA  70 !   This schedule operates
 Mode-B  : MA  70 to MA 256 !   every orbit, every day.
 Omnis   : MA 160 to MA  10 !     Alon/Alat 150/0
 Please DON'T uplink to mode-B MA 40-50; interferes with mode S.
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      Calendar of events for  Oscar-13 to the end of 1992
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                                                        Suns Position
 Date               Event            Modes   Sun Angle    SEL/SAZ
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 1992 Jul 20 [Mon] Move to 150/0   B  --  -    43 to 44    -34/176
 1992 Aug 17 [Mon] JLS ON          B  JL  S    28          -26/208
 1992 Sep 21 [Mon] Move to 180/0   B  JL  S    -1 to 29     -2/241
 1992 Nov 23 [Mon] Move to 210/0   B  JL  S   -29 to -4     33/305
 1992 Dec 14 [Mon] JLS OFF         B  --  -   -27           33/333
 1992 Dec 28 [Mon]  t.b.a.                     43           29/351
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AO-10 is currently available for Mode B operation when it is view of your
QTH.  PLEASE DO NOT attempt to use AO-10 if you hear the beacon or the
transponder signals FMing.

/EX
SB SAT @ AMSAT   $ANS-186.08
AO-16 EXPERIMENTER'S DAY

HR AMSAT NEWS SERVICE BULLETIN 186.08 FROM AMSAT HQ
SILVER SPRING, MD JULY 4, 1992        BID: $ANS-186.08
TO ALL RADIO AMATEURS BT

AO-16 Experimenter's Day Resumes In September.

The AO-16 Command Team has announced that the weekly Wednesday
Experimenter's Day activities will take a summer break.  Routine
Experimenter's Day operations will be suspended for June, July, and
August.  However, the AO-16 Command Team urges all users to continue
QRP Day operations each Wednesday by limiting their uplink power to
20-25 watts EIRP.

Experimenter's Day activities will resume in September.

/EX
SB SAT @ AMSAT   $ANS-186.09
NOMINATIONS FOR AMSAT-NA BOD CLOSE

HR AMSAT NEWS SERVICE BULLETIN 186.09 FROM AMSAT HQ
SILVER SPRING, MD JULY 4, 1992        BID: $ANS-186.09
TO ALL RADIO AMATEURS BT

Candidates For The AMSAT-NA Board-of-Directors (BOD)

The following AMSAT-NA members have been nominated to run for the three
seats which will expire this October '92 on the AMSAT-NA BOD.  The follow-
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ing names will appear on the ballot:

Joe Kasser	(W3/G3ZCZ)
Tom Clark	(W3IWI)
Eric Rosenberg	(WD3Q)
Dick Daniels	(W4PUJ)
Mike Crisler	(N4IFD)
Joe Holman	(KA7LDN)
Bob Diersing	(N5AHD)
Andy McAllister	(WA5ZIB)

Each elected board member serves a two year term. In $ANS-172.04 it was stated that the BOD ballots would come inside your AMSAT Journal. That was incorrect. Look for your ballot to be sent to you via first-class mail from AMSAT-NA HQ.

/EX
SB SAT @ AMSAT $ANS-186.10
STS-50 ELEMENT SET JSC-012

HR AMSAT NEWS SERVICE BULLETIN 186.10 FROM AMSAT HQ
SILVER SPRING, MD JULY 4, 1992 BID: $ANS-186.10
TO ALL RADIO AMATEURS BT

Latest Orbital Element Set For STS-50 (ORBIT 135)

STS-50
1 22000U 92 34 A 92186.06854608 -.00028000 00000-0 -18000-3 0 125
2 22000 28.4687 286.3289 0006983 326.9253 33.0967 15.91507355 1353

Satellite: STS-50
Catalog number: 22000
Epoch time: 92186.06854608 =====> (04 JUL 92 01:38:42.38 UTC)
Element set: JSC-012
Inclination: 28.4687 deg
RA of node: 286.3289 deg Space Shuttle Flight STS-50
Eccentricity: .0006983 SGP4 Keplerian Elements
Arg of perigee: 326.9253 deg from NASA flight Day 9 vector
Mean anomaly: 33.0967 deg
Mean motion: 15.91507355 rev/day W5RRR
Decay rate: -2.800e-04 rev/day*2 NASA Johnson Space Center
Epoch rev: 135

/EX